AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) An interface for use between a first network operating in accordance with a first transmission protocol and having network addresses in accordance with a first addressing convention, herein referred to as first type addresses, and a second network operating in accordance with a second transmission protocol and having network addresses in accordance with a second addressing convention, herein referred to as second type addresses, the interface having both a first type address and a second type address and comprising:

a protocol converter arranged to convert a message having a format in accordance with the first transmission protocol, herein referred to as a first type message, into a message having a format in accordance with the second transmission protocol, herein referred to as a second type message;

means for encapsulating arranged to respond to receipt of a second type address together with a first type message by encapsulating that received first type message as the payload of a resulting encapsulating second type message, using that received second type address as the destination address of the resulting encapsulating second type message and using the second type address of the interface as the source address of the resulting encapsulating second type message; and

an interface controller arranged to respond to receipt by the interface of a first type message from the first network by

(a) examining the destination address of that first type message received from the first network to determine whether the first type message is of a format in accordance with the first transmission protocol, and, ~~if so,~~

(b) if so, sending to the protocol converter that first type message received from the first network, and~~;~~,

(c) if not, deriving, directly or indirectly, from the destination address of that first type message, a second type address for use by the encapsulating means, and sending to the encapsulating means the derived second type address together with that first type message received from the first network.

2. (Previously Presented) An interface as in claim 1, wherein the controller is arranged to derive the second type address directly by retrieving it from a predetermined subaddress field of the destination address.

3. (Previously Presented) An interface as in claim 1, wherein the controller is arranged to derive the second type address indirectly by accessing, in accordance with the destination address, a look-up table having entries in the form of a first type address associated with a second type address, and retrieving the second type address of an entry having a first type address matching the destination address.

4. (Previously Presented) An interface as in claim 3, wherein each entry of the look-up table comprises a field for containing an identifier for identifying whether the controller is to send that first type message received from the first network to the protocol converter or to the encapsulating means.

5. (Previously Presented) An interface as in claim 1, wherein the encapsulating means comprises a plurality of different encapsulators, each encapsulator being arranged to operate in

accordance with a respective encapsulation type, and the controller is arranged to send that first type message received from the first network to the appropriate one of said plurality of different encapsulators in dependence upon the format of the destination address of that first type message.

6. (Previously Presented) An interface as in claim 3 wherein the encapsulating means comprises a plurality of different encapsulators, each encapsulator being arranged to operate in accordance with a respective encapsulation type, and the controller is arranged to send that first type message received from the first network to the appropriate one of said plurality of different encapsulators in dependence upon the format of the destination address of that first type message; and

wherein each entry of the look-up table comprises a field for containing an identifier for identifying a type of encapsulation.

7. (Previously Presented) An interface according to claim 1, further including means for un-encapsulating an encapsulating second type message to retrieve its payload.

8. (Previously Presented) An interface according to claim 1 wherein the protocol converter is further engaged to convert a second type message into a first type message.

9. (Previously Presented) A method of operating an interface between a first network and a second network, the first network having network addresses in accordance with a first addressing convention, herein referred to as first type addresses, and transmitting messages in accordance with a first transmission protocol, herein referred to as first type messages, and the second network having network addresses in accordance with a second addressing convention, herein referred to as second type addresses, and transmitting messages in accordance with a

second transmission protocol, herein referred to as second type messages, the method comprising:

examining the destination address of a first type message received from the first network; and

if the destination address of that received first type message is of a first predetermined format in accordance with the first addressing convention, protocol converting that received first type message;

and if not, encapsulating that received first type message in accordance with the second transmission protocol, using, as the destination address of a resulting encapsulating second type message, a second type address derived, directly or indirectly, from the destination address of that received first type message.

10. (Previously Presented) A method of operating an interface between a first network and a second network, the first network having network addresses in accordance with a first addressing convention, herein referred to as first type addresses, and transmitting messages in accordance with a first transmission protocol, herein referred to as first type messages, and the second network having network addresses in accordance with a second addressing convention, herein referred to as second type addresses, and transmitting messages in accordance with a second transmission protocol, herein referred to as second type messages, the method comprising:

examining the destination address of a first type message received from the first network; and

if the destination address of that received first type message is of a first predetermined format in accordance with the first addressing convention, protocol converting that received first type message; and

if the destination address of that received first type message is of a second predetermined format in accordance with the second addressing convention, encapsulating that received first type message in accordance with the second transmission protocol, using, as the destination address of a resulting encapsulating second type message, a second type address derived, directly or indirectly, from the destination address of that received first type message.

11. (Previously Presented) A method as in claim 10, wherein the second predetermined address format includes an identifier identifying an encapsulation type.

12. (Previously Presented) A method as in claim 9, wherein the first predetermined format includes a first predetermined portion whose content identifies that received first type message as suitable for protocol conversion.

13. (Previously Presented) A method as in claim 12, wherein the first predetermined format also includes a second predetermined portion whose content constitutes the second type address used as the destination address of a resulting encapsulating second type message.

14. (Previously Presented) A method as in claim 9, wherein the second type address is derived directly by retrieving it from a predetermined subaddress field of the destination address.

15. (Previously Presented) A method as in claim 9, wherein the examining step comprises the substeps of retrieving the destination address from the received first type message, and accessing a look-up table in accordance with the retrieved destination address.

16. (Previously Presented) A method as in claim 15, for use when the look-up table comprises entries in the form of a first type address associated with a second type address, and

wherein retrieval of the second type address of an entry having its first type address matching the destination address constitutes indirectly deriving the second type address from the destination address of that received first type message.

17. (Previously Presented) A method as in claim 16, for use when the look-up table entries include a first identifier field containing an identifier identifying whether that first type message is to be protocol converted or encapsulated, and including the steps of retrieving the identifier from the first identifier field of the entry having its first type address matching the destination address, and checking that the retrieved identifier is consistent with whichever of protocol conversion or encapsulation is to be performed upon that received first type message.

18. (Previously Presented) A method as in claim 16, for use when the look-up table entries includes a second identifier field containing an identifier identifying an encapsulation type, and when there is a plurality of encapsulation types available, and including the steps of retrieving the identifier from the second identifier field of the entry having its first type address matching the destination address, and checking that the retrieved identifier is consistent with the type of encapsulation to be performed upon that received first type message.

19-20. (Canceled)

21. (Previously Presented) An interface for use between a first network and a second network, the first network having network addresses in accordance with a first addressing convention, herein referred to as first type addresses, and transmitting messages in accordance with a first transmission protocol, herein referred to as first type messages, and the second network having network addresses in accordance with a second addressing convention, herein referred to as second type addresses, and transmitting messages in accordance with a second transmission protocol, herein referred to as second type messages, the interface comprising:

means for examining the destination address of a first type message received at the interface apparatus from the first network to determine whether the destination address of that received first type message is of a first predetermined format in accordance with the first addressing protocol;

a protocol converter responsive to a determination of the examining means that the destination address of that received first type message is of the first predetermined format to convert that received first type message; and

means for encapsulating responsive to a determination of the examining means that the destination address of that received first type message is not of the first predetermined format to encapsulate that received first type message in accordance with the second transmission protocol, using, as the destination address of a resulting encapsulating second type message, a second type address derived, directly or indirectly, from the destination address of that received first type message.